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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,107

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Richard M. Peterson

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DORITY & MANNING, P.A.  
POST OFFICE BOX 1449  
GREENVILLE, SC 29602-1449

EXAMINER

LAZORCIK, JASON L

ART UNIT

PAPER NUMBER

1791

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/813,107	<b>Applicant(s)</b> PETERSON ET AL.	
	<b>Examiner</b> JASON L. LAZORCIK	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 41-65,68-108 and 110-120 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 41-65,68-108 and 110-120 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/14/2008</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 14, 2008 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 41-65,68-108, and 110-120 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claims 41, 115, 117, and 119 recite the limitation "the Cigarette Extinction Test" in lines 7, 3, 3, and 3, respectively. There is insufficient antecedent basis for this limitation in the claim.

5. Further, although Applicants Specification provides generally for a "Cigarette Extinction Test" (see page 7, lines 1-7), one of ordinary skill in the arts would not be apprised of the specific nature of this test in view of the Specification as originally filed. That is, Applicants Specification has failed to provide any details regarding the materials or experimental protocol involved in the instant test and one of ordinary skill in the art. It

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follows that one of ordinary skill in the art would not necessarily be apprised of the specific nature or methods of the test and more importantly the extent of patent coverage encompassed by the claimed invention. In view of the indefinite nature of the claimed "Cigarette Extinction Test" the particular metes and bounds of Applicants claimed invention are rendered likewise unclear and indefinite.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 41-65, 68-108, and 110-120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson (US 5,878,753) in view of Hampl (US 4,739,755) and Hampl (US 6,298,860 B1) and the ordinary level of skill in the art at the time of the invention.**

With respect to independent **claims 41, 70, 83, and 113**, Peterson teaches a paper wrapper for a cigarette and the cigarette comprising said wrapper and tobacco column as depicted in the instant reference Figures 1 and 2. Figure 2 teaches cigarette paper web presenting a plurality of “discrete circumferential bands” [**Claims 42, 84**] coated with a film forming composition wherein consecutive bands are spaced apart by untreated regions of paper web. The reference clearly teaches that the treated regions have “a preferred permeability less than 6 ml/min.cm<sup>2</sup> (Coresta), and generally within a range of 2-6 ml/min/cm<sup>2</sup>.” (Column 5, lines 57-62) [**Claim 68, 95, 111**]

It is the Examiners understanding that both the Coresta (CU) and BMI or “Burn mode index” represent alternate but effectively equivalent measures of porosity and in the instant case specifically describe the porosity of the treated region or bands. To this end, although Peterson discloses a Coresta value for the bands which reads upon the claimed range, the reference fails to disclose the treated band porosity as measured by the BMI value.

The patent to Hampl et. al. (US 4,739,775) provides insight into the BMI value and its relation to the CU. The Hampl reference relates the methods of acquiring a BMI value in addition to presenting an exemplary comparison between the Coresta value of a wrapper (30 CU) and its equivalent porosity as measured by BMI (14 cm<sup>-1</sup>) (see Table 1). By the Hampl reference, it is the Examiners understanding that the CU and BMI are related by an approximate 2:1 ratio (e.g. 30 CU:14 BMI). Therefore absent compelling evidence to the contrary, Peterson is understood to teach a treated band

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presenting a BMI value of approximately  $3 \text{ cm}^{-1}$  or less (e.g. half the CU value of less than 6 CU) [**Claim 69, 81, 82, 112**].

Band Width and Band Spacing are Result Effective Variables Subject to Optimization

With respect the particular details of band width and spacing as required by **Claims 70 and 113**, the Peterson reference teaches that “Applicants have determined that, for the cigarettes tested, a minimum band width of 4mm is desired” (Column 6, Lines 3-4) [**claim 43, 85**] and that “In the cigarettes tested, applicants have found that a band spacing of between 5 and 10mm is appropriate” (Column 6, Lines 18-19) [**Claim 44, 45, 86, 87**].

Peterson further sets forth both band spacing and band width as clear result effective variables subject to empirical optimization. Specifically, Peterson teaches that the “width and spacing of bands are dependent on a number of variables, such as the initial permeability of wrapper 14, density of tobacco column 12, etc”. The reference continues by teaching that the bands preferably have a width sufficient to limit the oxygen provided to the burning coal. The reference further asserts that the band spacing should not be so large as to promote burning through the bands, but not so small as to self-extinguish the cigarette in a free-burn state. Therefore, the band width and band spacing are held as result effective variables of the paper wrapper which one of ordinary skill in the art would be able to optimize through routine experimentation.

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Number of Circumferential Bands is an Obvious Parameter in View of the Band Width, Band Spacing, and the Ordinary Level of Skill in the Art

With respect to Applicants newly submitted **Claims 114, 116, 118, and 120**, Peterson places neither explicit nor implicit limitations upon the number of bands applied to the paper wrapper, however the reference is silent regarding the particular limitation wherein the wrapper includes "up to three circumferential bands".

In view of the above discussion regarding the result effective nature of band width and spacing, said limitation is not deemed to patentably distinguish the claimed invention over that disclosed in the Peterson reference when viewed in light of the ordinary level of skill in the art at the time of the invention. Specifically, one of ordinary skill in the art at the time of the invention would view the total number of circumferential bands as a dependent variable based at least in part upon the desired length of the tobacco rod in addition to the above noted optimized width and spacing of said bands. It follows, that Applicants claimed paper wrapper comprising "up to three circumferential bands" would reasonably have been derived through no more than routine experimentation over the prior art disclosure.

Peterson Cigarette is Construed to Pass the claimed "Cigarette Extinction Test"

Applicants amended **claim 40** and new **claims 115, 117, and 119** incorporate the limitation wherein the treated areas reduce the ignition proclivity of a smoking article "sufficient for the smoking article to pass the Cigarette Extinction Test".

Although the prior art of record is silent regarding the named test, it is the Examiners understanding that effectively every cigarette will pass the "Cigarette Extinction Test" according to the broadest reasonable construction of the term. That is, one of ordinary skill would recognize that any cigarette which is ignited by an end user may likewise be extinguished at the smokers' discretion. Where the termed "Cigarette Extinction Test" is broadly read as any method or technique for extinguishing a cigarette, essentially every cigarette is read in the broadest reasonable construct as able to pass said test.

Should Applicant contest the Examiners broad construction of the termed Cigarette Extinction Test, Applicant is then directed to Peterson (column 10, Lines 40-57) which states in part that the treated region (38) of the cigarette has a width "which is great enough to cause the cigarette to self-extinguish if it is dropped or otherwise left on a flammable substrate" (col. 10, lines 40-43). Again in view of the cited passage, the Peterson cigarette is construed self-extinguish if left on a flammable substrate and therefore construed to pass the claimed "Cigarette Extinction Test".

The instant reference further discloses that "Applicants have found that a non-aqueous solution of a solvent soluble cellulosic polymer with a particulate inorganic non-reactive filler suspended in solution works particularly well" (Column 6, Lines 25-28) [**Claim 52, 57, 58, 63, 64, 73, 94, 100, 101, 106, and 107**]. The reference continues by teaching that particularly well-suited fillers include titanium oxide or a "metal oxide" [**Claim 65, 72, 74, 108**] (Column 7, Line 5) and that ethyl cellulose acts as a preferred

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binder for the filler particles (Column 6, Lines 54-56) [**Claim 75**]. While the above coating composition sets forth a preferred embodiment, Peterson teaches that aqueous solutions [**Claim 56, 99**] which a variety of common film forming components include alginate, polyvinyl alcohol [**Claim 48, Claim 50, 90, 92**]. Although not expressly disclosed in the instant reference, one of ordinary skill in the art would recognize both polyvinyl acetate and starch as potential substitutes for the film forming component in the film forming composition [**Claim 49, claim 51, 71, 91, 93**].

IN discussing the mode of depositing the bands, Peterson discloses that the bands are deposited using a commercial gravure press in a 3 pass process [**Claim 46, 47, 79, 80, 88, 89**]. Said deposition produces a “ramp pattern” increasing gradually from 0% to 100% over the three printing passes (Column 11, Lines 26-57). The disclosed process is understood to vary the amount of film forming composition applied to the paper web by at least 1% between at least two of the layers [**Claim 53, 54, 96, 97**].

Now, Peterson fails to explicitly teach the application of an alkali metal citrate to the paper web to act as a “burn control additive”, however such an addition would have been readily obvious to one of ordinary skill in the art at the time of the invention. Again looking to the analogous teachings of Hampl (US 4,739,775), it is disclosed that “While the base cigarette paper may be conventional, it may contain small amounts of an ash conditioner, such as potassium citrate. However the amount of the ash conditioner must be below the level which causes the wrappers to support combustion of a cigarette

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in spite of the bands. (Column 4, Lines 52-58). It would have therefore been obvious to one of ordinary skill in the art at the time of the invention to modify the Peterson invention to include a burn control additive such as an alkali citrate [**Claims 60, 61, 62, 103, 104, 105**]. This would have been an obvious modification to one of ordinary skill seeking to promote ash formation in a cigarette article.

Additionally, while Peterson teaches the use of a particular commercially available brand of paper (e.g. Kimberly-Clark Corporation KC Grade 603 paper) with a porosity of approximately 35 CU, the reference fails to explicitly teach the use of a paper web having a permeability of greater than about 60 CU as required by independent Claims 41, 70, 83, and 113. That said, Peterson does teach that “Wrapper (14) may include any manner of commercially available cigarette wrapper,...It should be understood that any other manner of paper web may be used in this regard.”(Column 5, Lines 23-27).

Hampl (US 6,298,860 B1) teaches the use of a paper for constructing smoking articles having a basis weight from 18 gsm to 60 gsm [**Claims 59, 102**] and also having “a permeability of from about 5 Coresta units to about 80 Coresta units” (Column 2, Lines 46-51). Since the use of a cigarette paper having a porosity of about 80 Coresta units is known in the art of cigarette manufacturing and Peterson teaches that any manner of commercially available cigarette paper can be used in the disclosed invention, the use of a paper having a permeability of “greater than about 60 Coresta” or

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“greater than about 80 Coresta units” would have been obvious modification to the Peterson process at the time of the invention [**Claims 55, 76, 77, 78, 98**].

### ***Response to Arguments***

8. Applicant's arguments filed August 14, 2008 have been fully considered but they are not persuasive.

9. On page 8 of the instant reply, Applicant argues that Peterson “clearly and explicitly teaches away from using paper wrappers having a relatively high permeability”.

10. The Examiner strongly disagrees with Applicants stated position.

11. In response to the above allegation, the Examiner finds absolutely no support for Applicants stated position, namely that Peterson “explicitly” teaches away from using high permeability papers. Rather, as noted in the previously issued Office Action dated April 14, 2008, Peterson teaches that “any commercially available cigarette paper” may be employed in the construction of the inventive cigarette wrapper. Peterson teaches an exemplary porosity of 35 Coresta, however the reference places neither explicit nor implicit limitations upon the porosity of paper that may be employed in the invention. Hampl ‘860 explicitly teaches that cigarette papers having a porosity of up to about 80 Coresta are conventional in the art of cigarette manufacture, and the use of the Hampl ‘860 paper in the Peterson cigarette structure would have represented an obvious extension over the prior art for one of ordinary skill in the cigarette arts for the reasons noted in the rejection of claims above.

12. Next, Applicant points to a passage in Peterson that teaches providing a gradually increasing thickness profile of the treated region in order to prevent an abrupt change in smoke delivery or taste (see column 10, lines 62-64 and column 10, lines 11-13). Applicant further notes that the Peterson disclosed cigarette embodiment employs a paper of 35 Coresta, which is “significantly lower than a wrapper having a permeability of 60 Coresta”. Applicant concludes that “using a paper having a permeability of greater than 60 Coresta would dramatically increase the change in permeability between the base paper and the treated area”. Applicant further concludes that use of a high permeability base paper would “naturally create an abrupt change in the permeability between the treated area and the wrapper” and that such a situation is “completely at odds with the teachings of Peterson”.

13. Again, the Examiner strongly disagrees.

14. Applicants cited passages in Peterson relate to the thickness or permeability profile of the treated region (see particularly figures 5, 6a, and 6b) and not *per se* to an absolute difference between the base paper porosity and the porosity of the treated region. That is, in a preferred embodiment, Peterson teaches providing a “gradually decreasing permeability profile 30 in the burn direction 32” so that the advancing coal will gradually advance into the region of maximum reduced permeability (38). This permeability ramp provides neither an express nor implicit limitation upon the porosity of the base paper.

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15. Further, to the extent that Applicant argues that papers having a porosity in the range disclosed by Hampl '680 are excluded from use in the Peterson cigarette, the Examiner notes that Applicant has failed to provide any evidence on the record in support of the instant allegation. Since Applicant has provided no conclusive evidence in support of the instant allegations, it follows that said allegations are held to be mere conjecture and attorney argument.

The Official policy regarding Attorney argument is clearly outlined in MPEP §2145 [R-3];

“Attorney argument is not evidence unless it is an admission, in which case, an examiner may use the admission in making a rejection. See MPEP § 2129 and § 2144.03 for a discussion of admissions as prior art. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) (“An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness.”). See MPEP § 716.01(c) for examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration.

16. Finally, Applicant will appreciate that figures 6a and 6b both teach abrupt step change profiles between the treated region and the base paper (14). These preferred embodiments appear to stand in direct contrast to Applicants allegation that an “abrupt change” in wrapper porosity is “completely at odds with the teachings of Peterson”.

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17. In short, Applicants arguments suggesting that the Peterson reference "clearly and explicitly" teaches away from the use of the Hampl '860 disclosed papers are found to be unpersuasive. The rejection of claims stands as previously presented in the Official Action dated April 14, 2008.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON L. LAZORCIK whose telephone number is (571)272-2217. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 1791